

217/785-1705

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT - NSPS SOURCE - RENEWAL

PERMITTEE

Adhesive Coating Technologies Incorporated
Attn: Mark Maddox
420 Northgate Parkway
Wheeling, Illinois 60090

<u>Application No.:</u> 85060023	<u>I.D. No.:</u> 031324ACZ
<u>Applicant's Designation:</u>	<u>Date Received:</u> February 2, 2010
<u>Subject:</u> Adhesive Tape Manufacturing Plant	
<u>Date Issued:</u> August 7, 2014	<u>Expiration Date:</u> August 7, 2024
<u>Location:</u> 420 Northgate Parkway, Wheeling, Cook County	

Permit is hereby granted to the above-designated Permittee to OPERATE emission unit(s) and/or air pollution control equipment consisting of one (1) adhesive coating line controlled by thermal afterburner pursuant to the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

- 1a. This federally enforceable state operating permit is issued:
 - i. To limit the emissions of air pollutants from the source to less than major source thresholds (i.e., 100 tons/year for Volatile Organic Material (VOM), 10 tons/year for any single Hazardous Air Pollutant (HAP) and 25 tons/year for any combination of such HAPs). As a result, the source is excluded from the requirement to obtain a Clean Air Act Permit Program (CAAPP) permit. The maximum emissions of this source, as limited by the conditions of this permit are described in Attachment A.
 - ii. To limit the potential emissions of VOM from the source to less than 25 tons/year. As a result, the source is excluded from the requirements of 35 Ill. Adm. Code Part 205 (Emission Reduction Market System). The maximum emissions of this source, as limited by the conditions of this permit, are described in Attachment A.
- b. Prior to issuance, a draft of this permit has undergone a public notice and comment period.
- c. This permit supersedes all operating permit(s) for this location.
- 2a. The adhesive coating line is subject to a New Source Performance Standard (NSPS) for Pressure Sensitive Tape and Label Surface Coating Operations, 40 CFR 60, Subparts A and RR. The Illinois EPA is administrating NSPS in Illinois on behalf of the United States EPA under a delegation agreement. Pursuant to 40 CFR 60.440(a), the affected facility to which the provisions of 40 CFR 60 Subpart RR apply is each coating line used in the manufacture of pressure sensitive tape and label materials.

- b. Pursuant to 40 CFR 60.440(b), any affected facility which inputs to the coating process 45 Mg (50 tons) of VOC or less per 12 month period is not subject to the emission limits of 40 CFR 60.442(a), however, the affected facility is subject to the requirements of all other applicable sections of 40 CFR 60 Subpart RR. If the amount of VOC input exceeds 45 Mg (50 tons) per 12 month period, the coating line will become subject to 40 CFR 60.442(a) and all other sections of 40 CFR 60 Subpart RR.
- c. Pursuant to 40 CFR 60.442(a), on and after the date on which the performance test required by 40 CFR 60.8 has been completed each owner or operator subject to 40 CFR 60 Subpart RR shall:
 - i. Cause the discharge into the atmosphere from an affected facility not more than 0.20 kg VOC/kg of coating solids applied as calculated on a weighted average basis for one calendar month; or
 - ii. Demonstrate for each affected facility:
 - A. A 90 percent overall VOC emission reduction as calculated over a calendar month; or
 - B. The percent overall VOC emission reduction specified in 40 CFR 60.443(b) as calculated over a calendar month.
- 3a. Pursuant to 35 Ill. Adm. Code 212.123(a), no person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to 35 Ill. Adm. Code 212.122.
- b. Pursuant to 35 Ill. Adm. Code 212.123(b), the emission of smoke or other particulate matter from any such emission unit may have an opacity greater than 30 percent but not greater than 60 percent for a period or periods aggregating 8 minutes in any 60 minute period provided that such opaque emissions permitted during any 60 minute period shall occur from only one such emission unit located within a 305 m (1000 ft) radius from the center point of any other such emission unit owned or operated by such person, and provided further that such opaque emissions permitted from each such emission unit shall be limited to 3 times in any 24 hour period.
- c. Pursuant to 35 Ill. Adm. Code 212.301, no person shall cause or allow the emission of fugitive particulate matter from any process, including any material handling or storage activity, that is visible by an observer looking generally toward the zenith at a point beyond the property line of the source.
- 4. Pursuant to 35 Ill. Adm. Code 214.301, except as further provided by 35 Ill. Adm. Code Part 214, no person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission source to exceed 2000 ppm.

- 5a. Pursuant to 35 Ill. Adm. Code 218.204(c), except as provided in 35 Ill. Adm. Code 218.205, 218.207, 218.208, 218.212, 218.215 and 218.216, no owner or operator of a coating line shall apply at any time any coating in which the VOM content exceeds the following emission limitations for Paper Coating. Except as otherwise provided in 35 Ill. Adm. Code 218.204(a), (c), (g), (h), (j), (l), (n), (p), and (q), compliance with the emission limitations in 35 Ill. Adm. Code 218.204 is required on and after March 15, 1996. The following emission limitations are expressed in units of VOM per volume of coating (minus water and any compounds which are specifically exempted from the definition of VOM) as applied at each coating applicator, except where noted. Compounds which are specifically exempted from the definition of VOM should be treated as water for the purpose of calculating the "less water" part of the coating composition. Compliance with 35 Ill. Adm. Code Part 218 Subpart F (Coating Operations) must be demonstrated through the VOM applicable coating analysis test methods and procedures specified in 35 Ill. Adm. Code 218.105(a) and the recordkeeping and reporting requirements specified in 35 Ill. Adm. Code 218.211(c) except where noted. (Note: The equation presented in 35 Ill. Adm. Code 218.206 shall be used to calculate emission limitations for determining compliance by add-on controls, credits for transfer efficiency, emissions trades and cross-line averaging.) The emission limitations are as follows:

On and after May 1, 2011:

	kg VOM/kg (lb VOM/lb) solids applied	kg VOM/kg (lb VOM/lb) coatings applied
i. Pressure sensitive tape and label surface coatings	0.20	(0.067)
ii. All other paper coatings	0.40	(0.08)
b. Pursuant to 35 Ill. Adm. Code 218.207(a), any owner or operator of a coating line subject to 35 Ill. Adm. Code 218.204, except coating lines subject to 35 Ill. Adm. Code 218.204(q)(6), may comply with 35 Ill. Adm. Code 218.207, rather than with 35 Ill. Adm. Code 218.204, if a capture system and control device are operated at all times the coating line is in operation and the owner or operator demonstrates compliance with 35 Ill. Adm. Code 218.207(c), (d), (e), (f), (g), (h), (i), (j), (k), (l), (m), or (n) (depending upon the source category) through the applicable coating analysis and capture system and control device efficiency test methods and procedures specified in 35 Ill. Adm. Code 218.105 and the recordkeeping and reporting requirements specified in 35 Ill. Adm. Code 218.211(e); and the control device is equipped with the applicable monitoring equipment specified in 35 Ill. Adm. Code 218.105(d) and the monitoring equipment is installed, calibrated, operated and maintained according to vendor specifications at all times the control device is in use. A capture system and control device,		

which does not demonstrate compliance with 35 Ill. Adm. Code 218.207(c), (d), (e), (f), (g), (h), (i), (j), (k), (l), (m), or (n) may be used as an alternative to compliance with 35 Ill. Adm. Code 218.204 only if the alternative is approved by the Illinois EPA and approved by the USEPA as a SIP revision.

- c. Pursuant to 35 Ill. Adm. Code 218.207(l), on and after May 1, 2011, no owner or operator of a paper coating line, metal furniture coating line, or large appliance coating line that is equipped with a capture system and control device shall operate the subject coating line unless either:
 - i. The capture system and control device provide at least 90 percent reduction in the overall emissions of VOM from the coating line; or
 - ii. The owner or operator complies with the applicable limitation set forth in 35 Ill. Adm. Code 218.204 by utilizing a combination of low-VOM coatings and a capture system and control device.
- d. Pursuant to 35 Ill. Adm. Code 218.301, no person shall cause or allow the discharge of more than 3.6 kg/hr (8 lbs/hr) of organic material into the atmosphere from any emission unit, except as provided in 35 Ill. Adm. Code 218.302, 218.303, or 218.304 and the following exception: If no odor nuisance exists the limitation of 35 Ill. Adm. Code Part 218 Subpart G (Use of Organic Material) shall only apply to photochemically reactive material.
- 6. This permit is issued based on the pressure sensitive tape coaters at this source not being subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Paper and Other Web Coating, 40 CFR 63 Subpart JJJJ. This is a result of the federally enforceable production and operating limitations, which restrict the potential to emit to less than 10 tons/year for any individual Hazardous Air Pollutant (HAP), and 25 tons/year of any combination of such HAPs.
- 7. Pursuant to 35 Ill. Adm. Code 212.314, 35 Ill. Adm. Code 212.301 shall not apply and spraying pursuant to 35 Ill. Adm. Code 212.304 through 212.310 and 35 Ill. Adm. Code 212.312 shall not be required when the wind speed is greater than 40.2 km/hr (25 mph). Determination of wind speed for the purposes of this rule shall be by a one-hour average or hourly recorded value at the nearest official station of the U.S. Weather Bureau or by wind speed instruments operated on the site. In cases where the duration of operations subject to this rule is less than one hour, wind speed may be averaged over the duration of the operations on the basis of on-site wind speed instrument measurements.
- 8a. Pursuant to 35 Ill. Adm. Code 218.187(a)(2)(B)(vii), notwithstanding 35 Ill. Adm. Code 218.187(a)(1): Cleaning operations for emission units within the paper, film, and foil coating categories shall be exempt from the requirements of 35 Ill. Adm. Code 218.187(b), (c), (d), (e), (f), and (g).

- b. Pursuant to 35 Ill. Adm. Code 218.204(c)(3), the paper coating limitation set forth in 35 Ill. Adm. Code 218.204(c) shall not apply to any owner or operator of any paper coating line on which flexographic, rotogravure, lithographic, or letterpress printing is performed if the paper coating line complies with the applicable emissions limitations in 35 Ill. Adm. Code 218 Subpart H. In addition, screen printing on paper is not regulated as paper coating, but is regulated under 35 Ill. Adm. Code 218 Subpart TT. On and after May 1, 2011, the paper coating limitation shall also not apply to coating performed on or in-line with any digital printing press, or to size presses and on-machine coaters on papermaking machines applying sizing or water-based clays.
- c. Pursuant to 35 Ill. Adm. Code 218.209, no owner or operator of a coating line subject to the limitations of 35 Ill. Adm. Code 218.204 is required to meet the limitations of 35 Ill. Adm. Code Part 218 Subpart G (35 Ill. Adm. Code 218.301 or 218.302), after the date by which the coating line is required to meet 35 Ill. Adm. Code 218.204.
- d. Pursuant to 35 Ill. Adm. Code 218.900(b)(1)(E), notwithstanding 35 Ill. Adm. Code 218.900(a): The requirements of 35 Ill. Adm. Code Part 218 Subpart JJ (Miscellaneous Industrial Adhesives) shall not apply to miscellaneous industrial adhesive application operations associated with paper, film, and foil coatings.
- 9. Pursuant to 40 CFR 60.11(d), at all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Illinois EPA or USEPA which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.
- 10a. Pursuant to 40 CFR 60.443(a), to determine compliance with 40 CFR 60.442 the owner or operator of the affected facility shall calculate a weighted average of the mass of solvent used per mass of coating solids applied for a one calendar month period according to the following procedures:
 - i. Determine the weight fraction of organics and the weight fraction of solids of each coating applied by using Reference Method 24 or by the coating manufacturer's formulation data.
 - ii. Compute the weighted average by the following equation:

$$G = \frac{\sum_{i=1}^n W_{oi} M_i}{\sum_{i=1}^n W_{si} M_i}$$

- iii. For each affected facility where the value of G is less than or equal to 0.20 kg VOC per kg of coating solids applied, the affected facility is in compliance with 40 CFR 60.442(a)(1).
- b. Pursuant to 40 CFR 60.443(b), to determine compliance with 40 CFR 60.442(a)(2), the owner or operator shall calculate the required overall VOC emission reduction according to the following equation:

$$R_q = \frac{G - 0.20}{G} \times 100$$

If R_q is less than or equal to 90 percent, then the required overall VOC emission reduction is R_q . If R_q is greater than 90 percent, then the required overall VOC emission reduction is 90 percent.

- c. Pursuant to 40 CFR 60.443(d), where compliance with the emission limit specified in 40 CFR 60.442(a)(2) is achieved through the use of a solvent destruction device, the owner or operator shall determine calendar monthly compliance by comparing the monthly required overall VOC emission reduction specified in 40 CFR 60.443(b) to the overall VOC emission reduction demonstrated in the most recent performance test which complied with 40 CFR 60.442(a)(2). If the monthly required overall VOC emission reduction is less than or equal to the overall VOC reduction of the most recent performance test, the affected facility is in compliance with 40 CFR 60.442(a)(2).
- d. Pursuant to 40 CFR 60.443(e), where compliance with 40 CFR 60.442(a)(2) is achieved through the use of a solvent destruction device, the owner or operator shall continuously record the destruction device combustion temperature during coating operations for thermal incineration destruction devices or the gas temperature upstream and downstream of the incinerator catalyst bed during coating operations for catalytic incineration destruction devices. For thermal incineration destruction devices the owner or operator shall record all 3-hour periods (during actual coating operations) during which the average temperature of the device is more than 28 °C (50 °F) below the average temperature of the device during the most recent performance test complying with 40 CFR 60.442(a)(2). For catalytic incineration destruction devices, the owner or operator shall record all 3-hour periods (during actual coating operations) during which the average temperature of the device immediately before the catalyst bed is more than 28 °C (50 °F) below the average temperature of the device during the most recent performance test complying with 40 CFR 60.442(a)(2), and all 3-hour periods (during actual coating operations) during which the average

temperature difference across the catalyst bed is less than 80 percent of the average temperature difference of the device during the most recent performance test complying with 40 CFR 60.442(a)(2).

- e. Pursuant to 40 CFR 60.443(f), after the initial performance test required for all affected facilities under 40 CFR 60.8, compliance with the VOC emission limitation and percentage reduction requirements under 40 CFR 60.442 is based on the average emission reduction for one calendar month. A separate compliance test is completed at the end of each calendar month after the initial performance test, and a new calendar month's average VOC emission reduction is calculated to show compliance with the standard.
 - f. Pursuant to 40 CFR 60.443(j), startups and shutdowns are normal operation for this source category. Emissions from these operations are to be included when determining if the standard specified at 40 CFR 60.442(a)(2) is being attained.
- 11a. Pursuant to 35 Ill. Adm. Code 212.306, all normal traffic pattern access areas surrounding storage piles specified in 35 Ill. Adm. Code 212.304 and all normal traffic pattern roads and parking facilities which are located on mining or manufacturing property shall be paved or treated with water, oils or chemical dust suppressants. All paved areas shall be cleaned on a regular basis. All areas treated with water, oils or chemical dust suppressants shall have the treatment applied on a regular basis, as needed, in accordance with the operating program required by 35 Ill. Adm. Code 212.309, 212.310 and 212.312.
- b. Pursuant to 35 Ill. Adm. Code 212.309(a), the emission units described in 35 Ill. Adm. Code 212.304 through 212.308 and 35 Ill. Adm. Code 212.316 shall be operated under the provisions of an operating program, consistent with the requirements set forth in 35 Ill. Adm. Code 212.310 and 212.312, and prepared by the owner or operator and submitted to the Illinois EPA for its review. Such operating program shall be designed to significantly reduce fugitive particulate matter emissions.
 - c. Pursuant to 35 Ill. Adm. Code 212.310, as a minimum the operating program shall include the following:
 - i. The name and address of the source;
 - ii. The name and address of the owner or operator responsible for execution of the operating program;
 - iii. A map or diagram of the source showing approximate locations of storage piles, conveyor loading operations, normal traffic pattern access areas surrounding storage piles and all normal traffic patterns within the source;
 - iv. Location of unloading and transporting operations with pollution control equipment;

- v. A detailed description of the best management practices utilized to achieve compliance with 35 Ill. Adm. Code 212 Subpart K, including an engineering specification of particulate collection equipment, application systems for water, oil, chemicals and dust suppressants utilized and equivalent methods utilized;
 - vi. Estimated frequency of application of dust suppressants by location of materials; and
 - vii. Such other information as may be necessary to facilitate the Illinois EPA's review of the operating program.
- d. Pursuant to 35 Ill. Adm. Code 212.312, the operating program shall be amended from time to time by the owner or operator so that the operating program is current. Such amendments shall be consistent with 35 Ill. Adm. Code 212 Subpart K (Fugitive Particulate Matter) and shall be submitted to the Illinois EPA for its review.
- 12a. Pursuant to 35 Ill. Adm. Code 218.210(g), no owner or operator of a coating line subject to the emission limitations in 35 Ill. Adm. Code 218.204(c)(2), (g)(2), or (h)(2) shall operate that coating line on or after a date consistent with 35 Ill. Adm. Code 218.106(e), unless the owner or operator has complied with, and continues to comply with, 35 Ill. Adm. Code 218.204(c)(2), (g)(2), or (h)(2), as applicable, or the alternative control options in 35 Ill. Adm. Code 218.205 or 218.207, and all applicable requirements in 35 Ill. Adm. Code 218.211 and 218.218.
- b. Pursuant to 35 Ill. Adm. Code 218.218(a), on and after May 1, 2011, every owner or operator of a source subject to the requirements of 35 Ill. Adm. Code 218.204(c) shall:
- i. Store all VOM-containing cleaning materials in closed containers;
 - ii. Ensure that mixing and storage containers used for VOM-containing materials are kept closed at all times except when depositing or removing those materials;
 - iii. Minimize spills of VOM-containing cleaning materials;
 - iv. Convey VOM-containing cleaning materials from one location to another in closed containers or pipes; and
 - v. Minimize VOM emissions from the cleaning of storage, mixing, and conveying equipment.
- 13a. In the event that the operation of this source results in an odor nuisance, the Permittee shall take appropriate and necessary actions to minimize odors, including but not limited to, changes in raw material or installation of controls, in order to eliminate the nuisance.

- b. The Permittee shall, in accordance with the manufacturer(s) and/or vendor(s) recommendations, perform periodic maintenance on the thermal afterburner such that the thermal afterburner is kept in proper working condition and not cause a violation of the Illinois Environmental Protection Act or regulations promulgated therein.
 - c. The thermal afterburner's combustion chamber shall be preheated to at least the manufacturer's recommended temperature but no less than the temperature at which compliance was demonstrated in the most recent compliance test, or 1,400°F in the absence of a compliance test. This temperature shall be maintained during operation.
 - d. The thermal afterburner shall only be operated with natural gas as the fuel. The use of any other fuel in the thermal afterburner requires that the Permittee first obtain a construction permit from the Illinois EPA and then perform stack testing to verify compliance with all applicable requirements.
- 14a. VOM emissions from and operation of the adhesive coating line shall not exceed the following limits:

VOM Emissions	
(Tons/Month)	(Tons/Year)
2.0	17.8

These limits are based on the maximum production rate. The VOM and HAP emissions shall be determined from the following equation:

$$E = \sum [(U_C \times C_{Uc}) \times (1 - CE) + U_{NC} \times C_{Unc}]$$

Where:

E = VOM or HAP emissions (ton);

U_C = raw material usage with afterburner running (ton);

C_{Uc} = VOM or HAP content of the raw material used with afterburner running (wt. fraction);

CE = Overall efficiency of the capture and control device (fraction) demonstrated during the most recent stack test;

U_{NC} = Raw material usage with uncontrolled emission (ton); and

C_{Unc} = VOM or HAP content of the raw material used with uncontrolled emission (wt. fraction)

- b. The VOM usage and emissions from equipment clean-up operations shall not exceed 0.2 ton/mo and 2.0 ton/yr. Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus preceding 11 months.
- c. Operation of and emissions from the thermal afterburner shall not exceed the following limits:

<u>Pollutant</u>	<u>Emission Factor</u> <u>(lbs/mmscf)</u>	<u>Emissions</u>	
		<u>(lbs/Hr)</u>	<u>(Tons/Yr)</u>
Carbon Monoxide (CO)	84.0	0.80	3.50
Nitrogen Oxides (NO _x)	100.0	0.95	4.16
Particulate Matter (PM)	7.6	0.07	0.32
Sulfur Dioxide (SO ₂)	0.6	0.01	0.03
Volatile Organic Material (VOM)	5.5	0.05	0.23

These limits are based on the maximum firing rate (9.5 mmBtu/hr), 8,760 hours/year of operation, and standard emission factors (Tables 1.4-1 and 1.4-2, AP-42, Fifth Edition, Volume I, Supplement D, July 1998).

- d. The emissions of Hazardous Air Pollutants (HAPs) as listed in Section 112(b) of the Clean Air Act from this source shall not exceed 0.79 tons/month and 7.9 tons/year of any single HAP and 1.78 tons/month and 17.8 tons/year of any combination of such HAPs. As a result of this condition, this permit is issued based on the emissions of any HAP from this source not triggering the requirements to obtain a Clean Air Act Permit Program permit from the Illinois EPA and the NESHAP for Paper and Other Web Coating, 40 CFR 63 Subpart JJJJ.
 - e. Compliance with the annual limits of this permit shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total).
- 15a. Pursuant to 40 CFR 60.8(a), at such other times as may be required by the Illinois EPA or USEPA under section 114 of the Clean Air Act, the owner or operator of such facility shall conduct performance test(s) and furnish the Illinois EPA or USEPA a written report of the results of such performance test(s).
- b. Pursuant to 40 CFR 60.8(b), performance tests shall be conducted and data reduced in accordance with the test methods and procedures contained in each applicable subpart of 40 CFR Part 60 unless the Illinois EPA or USEPA:
 - i. Specifies or approves, in specific cases, the use of a reference method with minor changes in methodology;
 - ii. Approves the use of an equivalent method;
 - iii. Approves the use of an alternative method the results of which he has determined to be adequate for indicating whether a specific source is in compliance;
 - iv. Waives the requirement for performance tests because the owner or operator of a source has demonstrated by other means to the Illinois EPA's or USEPA's satisfaction that the affected facility is in compliance with the standard; or

- v. Approves shorter sampling times and smaller sample volumes when necessitated by process variables or other factors. Nothing in this paragraph shall be construed to abrogate the Illinois EPA's or USEPA's authority to require testing under section 114 of the Clean Air Act.
- c. Pursuant to 40 CFR 60.8(c), performance tests shall be conducted under such conditions as the Illinois EPA or USEPA shall specify to the plant operator based on representative performance of the affected facility. The owner or operator shall make available to the Illinois EPA or USEPA such records as may be necessary to determine the conditions of the performance tests. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test nor shall emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard.
- d. Pursuant to 40 CFR 60.8(d), the owner or operator of an affected facility shall provide the Illinois EPA or USEPA at least 30 days prior notice of any performance test, except as specified under other subparts, to afford the Illinois EPA or USEPA the opportunity to have an observer present. If after 30-days notice for an initially scheduled performance test, there is a delay (due to operational problems, etc.) in conducting the scheduled performance test, the owner or operator of an affected facility shall notify the Illinois EPA or USEPA as soon as possible of any delay in the original test date, either by providing at least 7 days prior notice of the rescheduled date of the performance test, or by arranging a rescheduled date with the Illinois EPA or USEPA by mutual agreement.
- e. Pursuant to 40 CFR 60.8(e), the owner or operator of an affected facility shall provide, or cause to be provided, performance testing facilities as follows:
 - i. Sampling ports adequate for test methods applicable to such facility. This includes:
 - A. Constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test 1 methods and procedures; and
 - B. Providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures.
 - ii. Safe sampling platform(s).
 - iii. Safe access to sampling platform(s).
 - iv. Utilities for sampling and testing equipment.

- f. Pursuant to 40 CFR 60.8(f), unless otherwise specified in the applicable subpart of 40 CFR Part 60, each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard under 40 CFR Part 60. For the purpose of determining compliance with an applicable standard under 40 CFR Part 60, the arithmetic means of results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances, beyond the owner or operator's control, compliance may, upon the Illinois EPA's or USEPA's approval, be determined using the arithmetic mean of the results of the two other runs.
- 16a. Pursuant to 40 CFR 60.444(c), the performance test for affected facilities controlled by a solvent destruction device shall be conducted as follows:
- i. The performance of the solvent destruction device shall be determined by averaging the results of three test runs as specified in 40 CFR 60.8(f).
 - ii. Determine for each affected facility prior to each test run the weighted average mass of VOC per mass of coating solids applied being used at the facility. The weighted average shall be determined as specified in 40 CFR 60.443(a). In this application the quantities of W_{oi} , W_{si} , and M_{ci} shall be determined for the time period of each test run and not a calendar month as specified in 40 CFR 60.441.
 - iii. Calculate the required percent overall VOC emission reduction as specified in 40 CFR 60.443(b).
 - iv. Determine the percent overall VOC emission reduction of the solvent destruction device by the following equation and procedures:

$$R = \frac{\sum_{i=1}^P Q_{vi} C_{vi} - \sum_{j=1}^P Q_{vj} C_{vj}}{\sum_{i=1}^P Q_{vi} C_{vi} + \sum_{k=1}^P Q_{fk} C_{fk}} \times 100$$

- A. The owner or operator of the affected facility shall construct the overall VOC emission reduction system so that all volumetric flow rates and total VOC emissions can be accurately determined by the applicable test methods and procedures specified in 40 CFR 60.446(b).
- B. The owner or operator of an affected facility shall construct a temporary total enclosure around the coating line applicator and flashoff area during the performance test for the purpose of capturing fugitive VOC emissions.

If a permanent total enclosure exists in the affected facility prior to the performance test and the Illinois EPA or USEPA is satisfied that the enclosure is totally capturing fugitive VOC emissions, then no additional total enclosure will be required for the performance test.

- C. For each affected facility where the value of R is greater than or equal to the value of R_q calculated in 40 CFR 60.443(b), compliance with 40 CFR 60.442(a)(2) is demonstrated.
- b. Pursuant to 40 CFR 60.446(a), the VOC content per unit of coating solids applied and compliance with 40 CFR 60.422(a)(1) shall be determined by either Method 24 and the equations specified in 40 CFR 60.443 or by manufacturers' formulation data. In the event of any inconsistency between a Method 24 test and manufacturers' formulation data, the Method 24 test will govern. The Illinois EPA or USEPA may require an owner or operator to perform Method 24 tests during such months as he deems appropriate. For Method 24, the coating sample must be a one liter sample taken into a one liter container at a point where the sample will be representative of the coating applied to the web substrate.
- c. Pursuant to 40 CFR 60.446(b), Method 25 shall be used to determine the VOC concentration, in parts per million by volume, of each effluent gas stream entering and exiting the solvent destruction device or its equivalent, and each effluent gas stream emitted directly to the atmosphere. Methods 1, 2, 3, and 4 shall be used to determine the sampling location, volumetric flowrate, molecular weight, and moisture of all sampled gas streams. For Method 25, the sampling time for each of three runs must be at least 1 hour. The minimum sampling volume must be 0.003 dscm except that shorter sampling times or smaller volumes, when necessitated by process variables or other factors, may be approved by the Illinois EPA or USEPA.
- 17a. Pursuant to 35 Ill. Adm. Code 201.282, every emission source or air pollution control equipment shall be subject to the following testing requirements for the purpose of determining the nature and quantities of specified air contaminant emissions and for the purpose of determining ground level and ambient air concentrations of such air contaminants:
 - i. Testing by Owner or Operator. The Illinois EPA may require the owner or operator of the emission source or air pollution control equipment to conduct such tests in accordance with procedures adopted by the Illinois EPA, at such reasonable times as may be specified by the Illinois EPA and at the expense of the owner or operator of the emission source or air pollution control equipment. The Illinois EPA may adopt procedures detailing methods of testing and formats for reporting results of testing. Such procedures and revisions thereto, shall not become effective until filed with the Secretary of State, as required by the APA

Act. All such tests shall be made by or under the direction of a person qualified by training and/or experience in the field of air pollution testing. The Illinois EPA shall have the right to observe all aspects of such tests.

- ii. Testing by the Illinois EPA. The Illinois EPA shall have the right to conduct such tests at any time at its own expense. Upon request of the Illinois EPA, the owner or operator of the emission source or air pollution control equipment shall provide, without charge to the Illinois EPA, necessary holes in stacks or ducts and other safe and proper testing facilities, including scaffolding, but excluding instruments and sensing devices, as may be necessary.
- b. Testing required by Condition 18 shall be performed upon a written request from the Illinois EPA by a qualified independent testing service.
- 18. Pursuant to 35 Ill. Adm. Code 218.211(a), the VOM content of each coating and the efficiency of each capture system and control device shall be determined by the applicable test methods and procedures specified in 35 Ill. Adm. Code 218.105 to establish the records required under 35 Ill. Adm. Code 218.211.
- 19a. Pursuant to 40 CFR 60.445(e), the owner or operator of an affected facility controlled by a thermal incineration solvent destruction device shall install, calibrate, maintain, and operate a monitoring device which continuously indicates and records the temperature of the solvent destruction device's exhaust gases. The monitoring device shall have an accuracy of the greater of ± 0.75 percent of the temperature being measured expressed in degrees Celsius or ± 2.5 °C.
- b. Pursuant to 40 CFR 60.445(g), the owner or operator of an affected facility controlled by a solvent destruction device which uses a hood or enclosure to capture fugitive VOC emissions shall install, calibrate, maintain, and operate a monitoring device which continuously indicates that the hood or enclosure is operating. No continuous monitor shall be required if the owner or operator can demonstrate that the hood or enclosure system is interlocked with the affected facility's oven recirculation air system.
- 20a. Pursuant to 35 Ill. Adm. Code 218.105(d)(2)(A)(i), an owner or operator that uses an afterburner or carbon adsorber to comply with any Section of 35 Ill. Adm. Code Part 218 shall use Illinois EPA and USEPA approved continuous monitoring equipment which is installed, calibrated, maintained, and operated according to vendor specifications at all times the control device is in use except as provided in 35 Ill. Adm. Code 218.105(d)(3). The continuous monitoring equipment must monitor for each afterburner which does not have a catalyst bed, the combustion chamber temperature of each afterburner.

- b. Pursuant to 35 Ill. Adm. Code 218.105(d)(2)(B), an owner or operator must install, calibrate, operate and maintain, in accordance with manufacturer's specifications, a continuous recorder on the temperature monitoring device, such as a strip chart, recorder or computer, having an accuracy of ± 1 percent of the temperature measured in degrees Celsius or $\pm 0.5^{\circ}\text{C}$, whichever is greater.
- 21a. Pursuant to 40 CFR 60.7(b), any owner or operator subject to the provisions of 40 CFR Part 60 shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.
- b. Pursuant to 40 CFR 60.7(f), any owner or operator subject to the provisions of 40 CFR Part 60 shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by 40 CFR Part 60 recorded in a permanent form suitable for inspection. The file shall be retained for at least two years following the date of such measurements, maintenance, reports, and records.
- 22a. Pursuant to 40 CFR 60.445(a), the owner or operator of an affected facility subject to 40 CFR 60 Subpart RR shall maintain a calendar month record of all coatings used and the results of the reference test method specified in 40 CFR 60.446(a) or the manufacturer's formulation data used for determining the VOC content of those coatings.
- b. Pursuant to 40 CFR 60.445(d), the owner or operator of an affected facility operating at the conditions specified in 40 CFR 60.440(b) shall maintain a 12 month record of the amount of solvent applied in the coating at the facility.
- c. Pursuant to 40 CFR 60.445(h), records of the measurements required in 40 CFR 60.443 and 60.445 must be retained for at least two years following the date of the measurements.
- 23. Pursuant to 40 CFR 63.10(b)(3), if an owner or operator determines that his or her stationary source that emits (or has the potential to emit, without considering controls) one or more hazardous air pollutants regulated by any standard established pursuant to Section 112(d) or (f) of the Clean Air Act, and that stationary source is in the source category regulated by the relevant standard, but that source is not subject to the relevant standard (or other requirement established under 40 CFR Part 63) because of limitations on the source's potential to emit or an exclusion, the owner or operator must keep a record of the applicability determination on site at the source for a period of 5 years after the determination, or until the source changes its operations to become an affected source, whichever comes first. The

record of the applicability determination must be signed by the person making the determination and include an analysis (or other information) that demonstrates why the owner or operator believes the source is unaffected (e.g., because the source is an area source). The analysis (or other information) must be sufficiently detailed to allow the USEPA and/or Illinois EPA to make a finding about the source's applicability status with regard to the relevant standard or other requirement. If relevant, the analysis must be performed in accordance with requirements established in relevant subparts of 40 CFR Part 63 for this purpose for particular categories of stationary sources. If relevant, the analysis should be performed in accordance with USEPA guidance materials published to assist sources in making applicability determinations under Section 112 of the Clean Air Act, if any. The requirements to determine applicability of a standard under 40 CFR 63.1(b)(3) and to record the results of that determination under 40 CFR 63.10(b)(3) shall not by themselves create an obligation for the owner or operator to obtain a Title V permit.

- 24a. Pursuant to 35 Ill. Adm. Code 218.211(c)(2), any owner or operator of a coating line subject to the limitations of 35 Ill. Adm. Code 218.204 other than 35 Ill. Adm. Code 218.204(a)(1)(B), (a)(1)(C), (a)(2)(B), (a)(2)(C), or (a)(2)(D) and complying by means of 35 Ill. Adm. Code 218.204 shall comply with the following: On and after a date consistent with 35 Ill. Adm. Code 218.106, or on and after the initial start-up date, the owner or operator of a subject coating line shall collect and record all of the following information each day, unless otherwise specified, for each coating line and maintain the information at the source for a period of three years:
- i. The names, identification number of each coating as applied on each coating line;
 - ii. The weight of VOM per volume of each coating (minus water and any compounds which are specifically exempted from the definition of VOM) as applied each day on each coating line;
 - iii. For coating lines subject to the limitations of 35 Ill. Adm. Code 218.204(c)(2), the weight of VOM per weight of solids (or the weight of VOM per weight of coatings, as applicable) in each coating as applied each day on each coating line, and certified product data sheets for each coating.
- b. Pursuant to 35 Ill. Adm. Code 218.211(e)(2), any owner or operator of a coating line subject to the limitations of 35 Ill. Adm. Code 218.207 and complying by means of 35 Ill. Adm. Code 218.207(c), (d), (e), (f), (g), (h), (l), (m), or (n) shall comply with the following: On and after a date consistent with Section 218.106 of this Part, or on and after the initial start-up date, the owner or operator of a subject coating line shall collect and record all of the following information each day for each coating line and maintain the information at the source for a period of three years:

- i. The weight of VOM per volume of coating solids as applied each day on each coating line, if complying pursuant to 35 Ill. Adm. Code 218.207(b)(2).
 - ii. Control device monitoring data.
 - iii. A log of operating time for the capture system, control device, monitoring equipment and the associated coating line.
 - iv. A maintenance log for the capture system, control device and monitoring equipment detailing all routine and non-routine maintenance performed including dates and duration of any outages.
- c. Pursuant to 35 Ill. Adm. Code 218.211(g)(3), on and after a date consistent with 35 Ill. Adm. Code 218.106(e), or on and after the initial startup date, whichever is later, the owner or operator of a coating line subject to the requirements of 35 Ill. Adm. Code 218.218 shall comply with the following: Maintain at the source all records required by 35 Ill. Adm. Code 218.211(g) for a minimum of three years from the date the document was created and make those records available to the Illinois EPA upon request.
- 25a. The Permittee shall maintain records of the following items so as to demonstrate compliance with the conditions of this permit:
- i. Records addressing use of good operating practices for the thermal afterburner:
 - A. Records for periodic inspection of the thermal afterburner with date, individual performing the inspection, and nature of inspection; and
 - B. Records for prompt repair of defects, with identification and description of defect, effect on emissions, date identified, date repaired, and nature of repair.
 - ii. The names, identification numbers and usage of each coating (gal/mo, gal/yr or ton/mo, ton/yr), separately for periods of times when control device was running and when emission to atmosphere was uncontrolled;
 - iii. The weight of VOM per volume of each coating (wt.%), separately for periods of times when control device was running and when emission to atmosphere was uncontrolled;
 - iii. HAP content of each coating (lb/gal or wt.%);
 - iv. Clean-up solvent usage (ton/mo and ton/year) and its VOM and HAP content (wt. %);

- v. Operating time of the thermal afterburner (hour/month and hours/year); and
 - vi. Monthly and annual emissions of VOM and HAP from the source with supporting calculations (ton/mo and ton/year).
- b. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least five (5) years from the date of entry and shall be made available for inspection and copying by the Illinois EPA or USEPA upon request. Any records retained in an electronic format (e.g., computer storage device) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Illinois EPA or USEPA request for records during the course of a source inspection.
- 26a. Pursuant to 40 CFR 60.447(a), for all affected facilities subject to compliance with 40 CFR 60.442, the performance test data and results from the performance test shall be submitted to the Illinois EPA or USEPA as specified in 40 CFR 60.8(a) of the General Provisions (40 CFR Part 60, Subpart A).
- b. Pursuant to 40 CFR 60.447(b), following the initial performance test, the owner or operator of each affected facility shall submit quarterly reports to the Illinois EPA or USEPA of exceedances of the VOC emission limits specified in 40 CFR 60.442. If no such exceedances occur during a particular quarter, a report stating this shall be submitted to the Illinois EPA or USEPA semiannually.
- 27a. Pursuant to 35 Ill. Adm. Code 218.211(c)(3), any owner or operator of a coating line subject to the limitations of 35 Ill. Adm. Code 218.204 other than 35 Ill. Adm. Code 218.204(a)(1)(B), (a)(1)(C), (a)(2)(B), (a)(2)(C), or (a)(2)(D) and complying by means of 35 Ill. Adm. Code 218.204 shall comply with the following: On and after a date consistent with 35 Ill. Adm. Code 218.106, the owner or operator of a subject coating line shall notify the Illinois EPA in the following instances:
- i. Any record showing violation of 35 Ill. Adm. Code 218.204 shall be reported by sending a copy of such record to the Illinois EPA within 30 days following the occurrence of the violation.
 - ii. At least 30 calendar days before changing the method of compliance from 35 Ill. Adm. Code 218.204 to 35 Ill. Adm. Code 218.205 or 35 Ill. Adm. Code 218.207, the owner or operator shall comply with all requirements of 35 Ill. Adm. Code 218.211(d)(1) or (e)(1), as applicable. Upon changing the method of compliance from 35 Ill. Adm. Code 218.204 to 35 Ill. Adm. Code 218.205 or 35 Ill. Adm. Code 218.207, the owner or operator shall comply with all requirements of 35 Ill. Adm. Code 218.211(d) or (e), as applicable.

- b. Pursuant to 35 Ill. Adm. Code 218.211(e)(3), any owner or operator of a coating line subject to the limitations of 35 Ill. Adm. Code 218.207 and complying by means of 35 Ill. Adm. Code 218.207(c), (d), (e), (f), (g) or (h) comply with the following: On and after a date consistent with 35 Ill. Adm. Code 218.106, the owner or operator of a subject coating line shall notify the Illinois EPA in the following instances:
 - i. Any record showing violation of 35 Ill. Adm. Code 218.207 shall be reported by sending a copy of such record to the Illinois EPA within 30 days following the occurrence of the violation.
 - ii. At least 30 calendar days before changing the method of compliance with 35 Ill. Adm. Code 218 Subpart F from 35 Ill. Adm. Code 218.207 to 35 Ill. Adm. Code 218.204 or 35 Ill. Adm. Code 218.205, the owner or operator shall comply with all requirements of 35 Ill. Adm. Code 218.207(c)(1) or (d)(1), respectively. Upon changing the method of compliance with 35 Ill. Adm. Code 218 Subpart F from 35 Ill. Adm. Code 218.207 to 35 Ill. Adm. Code 218.204 or 35 Ill. Adm. Code 218.205, the owner or operator shall comply with all requirements of 35 Ill. Adm. Code 218.207(c) or (d), respectively.
 - c. Pursuant to 35 Ill. Adm. Code 218.211(g)(2), on and after a date consistent with 35 Ill. Adm. Code 218.106(e), or on and after the initial startup date, whichever is later, the owner or operator of a coating line subject to the requirements of 35 Ill. Adm. Code 218.218 shall comply with the following: Notify the Illinois EPA of any violation of Ill. Adm. Code 218.218 by providing a description of the violation and copies of records documenting the violation to the Illinois EPA within 30 days following the occurrence of the violation.
- 28a. If there is an exceedance of or a deviation from the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Unit in Springfield, Illinois within 30 days after the exceedance or deviation. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedances or deviation and efforts to reduce emissions and future occurrences.
- b. Two (2) copies of required reports and notifications shall be sent to:
 - Illinois Environmental Protection Agency
 - Division of Air Pollution Control
 - Compliance Section (#40)
 - P.O. Box 19276
 - Springfield, Illinois 62794-9276

and one (1) copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

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Illinois Environmental Protection Agency
Division of Air Pollution Control
9511 West Harrison
Des Plaines, Illinois 60016

If you have any questions on this, please call Valeriy Brodsky at
217/785-1705.

Raymond E. Pilapil
Acting Manager, Permit Section
Division of Air Pollution Control

Date Signed: _____

REP:VJB:jws

cc: Illinois EPA, FOS Region 1
Lotus Notes

Attachment A-Emissions Summary

This attachment provides a summary of the maximum emission from the adhesive tape manufacturing plant, operating in compliance with the requirements of this federally enforceable permit. In preparing this summary, the Illinois EPA used the annual operating scenario which results in maximum emissions from such a plant. The resulting maximum emissions are below the levels (e.g., 100 tons/year for VOM, 10 tons/year for any single HAP and 25 tons/year for any combination of such HAPs) at which this source would be considered a major source for purposes of the Clean Air Act Permit Program. Actual emissions from this source will be less than predicted in this summary to the extent that material is handled, coatings used and control measures are more effective than in this permit.

<u>Emission Unit</u>	E M I S S I O N S (Tons/Year)						Single <u>HAP</u>	Combined <u>HAPs</u>
	<u>CO</u>	<u>NO_x</u>	<u>PM</u>	<u>SO₂</u>	<u>VOM</u>			
Coating Line					17.80			
Fuel Combustion	<u>3.50</u>	<u>4.16</u>	<u>0.32</u>	<u>0.03</u>	<u>0.23</u>	<u>--</u>	<u>--</u>	
Totals	<u>3.50</u>	<u>4.16</u>	<u>0.32</u>	<u>0.03</u>	<u>18.03</u>	<u>7.9</u>		<u>19.9</u>